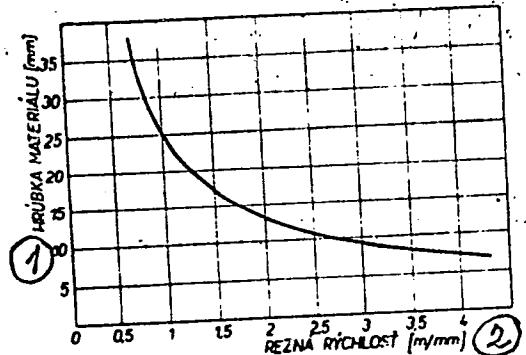


Gas-shielded electric-arc...



Obr. 11. Závislosť rýchlosťi rezania od hrúbky hliníkového plechu.

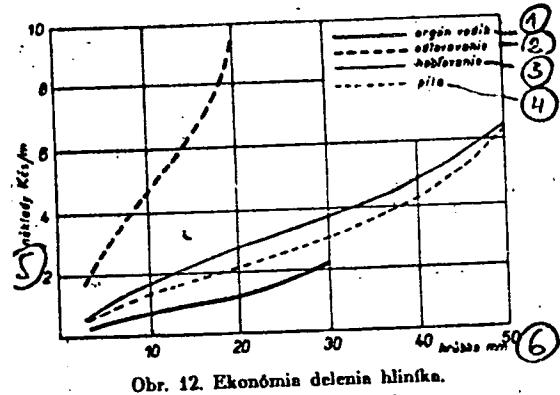
SLOV/006/60/000/001/002/002  
D216/D306

Fig. 11. Dependence of cutting speed on thickness of aluminum plate. - Legend: (1) Material thickness (mm); (2) Cutting speed (m/mm)

Current, 250-380 amp.; voltage, 65-75 v; gas quantity, 22-25 liters/min. The pattern of the curve for other materials is similar except that the cutting speeds are lower. The economy of the new method as compared to other cutting methods can be seen from Fig. 12.

Card 5/7

## Gas-shielded electric-arc...



Obr. 12. Ekonómia delenia hliníka.

SLOV/006/60/000/001/002/002  
D216/D306

Fig. 12. Economy of aluminum plate cutting. - Legend:  
 (1) argon-hydrogen; (2) melting down; (3) planing; (4) sawing;  
 (5) costs (Kčs/m); (6) thickness (mm)

In conclusion it can be said that the gas-shielded arc cutting method can be advantageously applied to cutting aluminum, copper, stainless-clad plates and other materials which cannot be severed by

oxygen cutting. The fused-on and heat-affected zones in all these materials are much smaller than with oxygen cutting. The kerf faces are of a high quality and the economy is very favorable and was confirmed

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D216/D306

Gas-shielded electric-arc...

during the test operation of the prototype machines. There are 12 figures.

ASSOCIATION: VUZ Bratislava

Card 7/7

12360

89840  
G/014/60/000/002/002/002  
D027/D109

AUTHOR: Matejec, M., Engineer

TITLE: New equipment for cutting of metals with the aid of the shielded electric arc.

PERIODICAL: Schweisstechnik, no. 2, 1960, 51-53

TEXT: Many tests have been made during the past years to study the phenomena of the shielded arc. However, a practical evaluation was made possible only recently when with the aid of a special test arrangement the arc plasma in the form of a narrow nozzle was used for cutting only, thus eliminating the material transport, whereas the arc transporting the welding material is only used for welding and fillet welding. The author then briefly describes fundamentals of shielded arc welding and mentions the following characteristic results obtained during electric arc tests: (1) the arc is thin where by its calorific value is very large due to the surrounding atmosphere; (2) voltage and amperage have to match the thickness of the material to be cut; (3) that part of the heat generated at the electrode and in the upper part of the arc must be transferred to the material by the stream of gas; (4) the

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G/014/60/000/002/002/002  
D027/D109

New equipment for cutting metals .....

exhaust velocity of gases in the arc and in the jacket is so high, that the gas stream, reinforced by the influence of the arc, drives off the molten material from the cutting groove so that edges remain smooth and clean.

The arc voltage depends on the elements of which the gas shielding surrounding the arc is composed. By adding hydrogen to argon - eventually by adding also nitrogen - the arc voltage increases to 60 to 90 V due to dissociation. A further increase of the terminal voltage above 100 to 110 V would endanger handling during operation. Hydrogen increases remarkably the exhaust velocity of gases at the torch opening and directly effects the removal of molten material from the cutting groove. Its quantity depends on the characteristic of the material to be cut; and also the mixture ratios argon - hydrogen, and nitrogen - hydrogen change.

After finishing the tests on properties of the narrow arc, a prototype of the VUS torch "arg.ORS" was developed. It was intended to also use this torch with present oxygen torches. Fig.2 shows the complete set, Fig.3 the semi-automatic torch cutter "Mikron" RSO (with oxyacetylene torch replaced by arc torch), and Fig 4 shows the hand torch (abstractor's note: Figs 3 & 4 have been mixed up in the text).

Card 2/6

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G/014/60/000/002/002/002  
D027/D109

New equipment for cutting metals.....

Cutting of edges can be performed by the usual adjusting of an angle under which the torch has to cut. The orifice must be designed such as to enable an arbitrary angle setting without changing the distance between the material and the orifice. Torch cutting of cast iron, plated steel and other hard-to-cut metals is not limited by the material property but only by material thickness. All edges cut with the arc are straight and clean and can be used for welding without any additional processing.

According to the given conditions aluminium can be cut up to 35 mm thickness, stainless steel and copper up to 30 mm thickness. For cutting of greater thicknesses it becomes necessary to adapt the torch as well as the power source. The cutting speed for shielded arc cutting depends to a large extent on the material thickness. Fig.5 shows the cutting speed depending on sheet thickness. For cutting of other material the diagram characteristics are similar. The author ends his article with the statement that a wide application of this shielded arc cutting equipment largely depends on the availability of a suitable power source which is presently being developed in the CSR. As temporary replacement serves the set Praga 500 (domestic product) which can be used to cut aluminum up to 35 mm and

Card 3/6

New equipment for cutting metals.....

other material up to 20 mm thickness. For cutting of greater thicknesses  
the power source has to be connected series-parallel. There are 5 figures.

ASSOCIATION: Forschungsinstitut fuer Schweißtechnik, Bratislava (Research  
Institute for Welding Engineering).

89840

G/014/60/0C0/002/002/002

D027/D109

X

Card 4/6

MATEJEC, Michal, inz.

Equipment for plasma-cutting of metals. Zvaranie 11 no. 6:169-172  
Je 62.

1. Vyzkumny ustav zvaracsky, Bratislava.

MATEJEC, Michal, inz.

Plasma cutting technology. Zvaranie 12 no.1:2-6 Ja '63.

1. Vyskumny ustav zvaracsky, Bratislava.

MATEJEC, R

91  
J6013. LIGHT ABSORPTION MEASUREMENTS ON SILVER HALIDE CRYSTALS AT HIGHER TEMPERATURES. R.Matejec.  
Z. Phys., Vol. 147; No. 6, 693-9 (1957). In German.

Crystals of Ag halides formed between quartz plates showed the long wavelength tail of the absorption curve extending further into the visible as the temperature increased up to 840°C, with a sudden larger shift at the melting point. This was more sharply defined for AgBr than for AgCl. Slow cooling reversed the changes. Several hours' heating at 500-600°C produced a new absorption band centred at about 7200 Å due to the formation of colloidal Ag, which disappeared on cooling. This colloidal Ag was not increased in quantity by exposure to white light at the high temperature. Colloidal Ag produced by light at room temperature granulated on heating and was not reabsorbed; it gave general optical absorption, not the band at 7200 Å.

S.T.Henderson

for MT

EAST GERMANY/Electricity - Dielectric.

Abs J ur : Ref Zhur - Fizika, No 6, 1959, 13310

Author : Matejcc, R.

Inst :

Title : Measurements of Electric Conductivity of Single-Crystal  
Silver Halogenides.

Orig Pub : Z. Phys., 1957, 148, No 4, 454-495

Abstract : No abstract.

Card 1/1

COUNTRY	:	GDR	B-5
CATEGORY	:		
ABS. JOUR.	:	RZhKhim., no. 21 1959, no.	74007
AUTHOR	:	Matejev, R.	
IF SP.	:	Not given	
TITLE	:	The Kinetics of the Formation and Recombination of Frenkel Defects in Silver Halide Crystals	
ORIG. PUB.	:	Z Phys., 151, No 5, 595-612 (1958)	
ABSTRACT	:	A nonequilibrium concentration of defects in Ag-halide crystals under various conditions of heating and cooling has been obtained from data on the temperature dependence of the equilibrium concentration of defects, interstitial Ag <sup>+</sup> ions and vacancies in the silver sublattice. The kinetics for the establishment of the equilibrium concentration have been calculated. The theory is compared with the experimental results. Crystalline AgBr was rapidly cooled from room temperature	
CARD: 1/3			

COUNTRY	:	GDR	B-5
CATEGORY	:		
ABS. JOUR.	:	RZKhim., No. 21 1959, No.	74007
AUTHOR	:		
INST.	:		
TITLE	:		
ORIG. PUB.	:		
ABSTRACT	:	to liquid air temperature, held for some time at that temperature, and then rapidly heated to -20°. On heating, the electric conductivity begins to increase, attains a maximum, and then decreases to the equilibrium value for that temperature. A sudden cooling of the crystals freezes the defects. The subsequent rapid heating to a temperature below that from which the initial quenching was started results in an excess concentration of defects for that particular temperature; the excess	

CARD: 2/3

21

MATEJECK, J.

Paris exhibition of aeronautics. Words and pictures about the world of aviation.

p. 416

p. 418

No. 18, Sept. 1955

KRIDLA VLASTI

Praha, Czechoslovakia

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, no. 2  
February 1956, Uncl.

YUGOSLAVIA/Chemical Technology. Chemical Products and Their Application. - Corrosion. Corrosion Control.

R-4

Abs Jour: Ref. Jeur-Khim., No 2, 1959, 5046.

Author : Matejic, Miroslav.

Inst :

Title : Effect of Corrosion on Fatigue of Metals.

Orig Pub: Zast. mater., 1957, 5, No 12, 423-427.

Abstract: Questions concerning the corrosion (C) of various metals and alloys under conditions of fatigue are discussed. The determination of  $\sigma_w$  of specimens of metals, which had preliminarily been exposed to C, yielded following results depending on the kind of C. Uniform C did not affect the fatigue of a metal. Pitting noticeably decreased  $\sigma_w$ , as well as other mechanical properties. Intercrystallite C affects the fatigue very much. The determination of  $\sigma_w$  of specimens in the simultaneous

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YUGOSLAVIA/Chemical Technology. Chemical Products and Their  
Application. Corrosion. Corrosion Control.

H-4

Abs Jour: Ref Zhur-Khim., No 2, 1959, 5046.

action of the corrosion medium resulted in following relations: In the absence of  $O_2$ , a solutions of sea water had a quite negligible effect on the decrease of  $\sigma_w$  of carbon steel.  $\sigma_w$  of many materials (steel containing 0.5% C, stainless steel with 0.12% C and 15% Cr, duralumin, pure annealed Cu, annealed brass, Pb) was greater in vacuo than in air. In the case of Pb, it was 2.24 times greater. The presence or absence of  $O_2$  did not influence the magnitude of  $\sigma_w$  only in the case of alloys of Mg with 2% Al.  $\sigma_w$  increased in dry air. It is assumed that the influence of the atmospheric C on the fatigue of metals is caused by the catalytic action of water in the presence of  $O_2$ . The following explanation of the mechanism of destruction in consequence of the corrosion fatigue is offered. The protective film appearing on the surface of the metal is continually

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10

YUGOSLAVIA/Chemical Technology. Chemical Products and Their  
Application. Corrosion. Corrosion Control.

H-4

Abs Jour: Ref Zhur-Khim., No 2, 1959, 5046.

destroyed in various places under the influence of sign-changing loads, and thus the conditions for the formation of initial seats of corrosion in the shape of intercrystallite fissures are created. In time the fissures expand as branches or as a cob web under the action of repeated loads, which results in a rapid destruction of the protective film. The dependence of <sup>w</sup> on the number of cycles of sign-changing loads was noted. Thus, a specimen of steel alloyed with Si and Ni exposed to the action of sweet water withstood 1 million of blows made at the rate of 1450 blows per min, while at the rate of 5 blows per min and under the influence of the same loads the destruction took place after 110,000 blows. The following are the most effective methods of

Card : 3/4

YUGOSLAVIA/Chemical Technology. Chemical Products and Their Application. Corrosion. Corrosion Control.

H-4

Abs Jour: Ref Zhur-Khim., No 2, 1959, 5046.

protection of various steels from C in sweet water and from the decrease of  $\Delta V$  connected with it: electrolytic coating, nitriding, coating with plastics and addition of 0.02% Na<sub>2</sub>CrO<sub>4</sub> to the water. - V. Levinson.

Card : 4/4

11

MARIN, S.; FRANCISKOVIC, V.; KUIS, M.; MATEJCIC, M.

Clinical and surgical evaluation of the possibility of bronchial carcinoma. Tuberkuloza 17 n 1/2015-10. 2-14 '79.

1. Bolnica za tuberkulozu pluca, Icici; Kirurska klinika bolnice dr. Kucic, Rijeka, Grudno odjeljenje opce bolnice, Rijeka; Penjat zavod bolnice dr. Kucic, Rijeka.

MATEJIC, Vlastimir, inz. (Beograd, Bulevar Revolucije 54)

Methods of operational research. Tehnika Jug 17 no.7:Suppl.:  
Organizacija rada 12 no.7:1403-1413 JI '62.

1. Upravnik Centra za obucavanje rukovodecih kadrova, Beograd.

Czechoslovakia/Fitting Out of Laboratories - Instruments, Their Theory, Construction, and Use, H

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62005

Author: Matejicek, A., Pajl, Z.

Institution: None

Title: Device for Automatic Recording of Distillation Curve

Original

Periodical: Pristroj pro samocinny zaznam destilacni krivky, Chem. prumysl., 1956, 6, No 3, 96-98; Czech; Russian, English resumés

Abstract: Description of a laboratory instrument in which the amount of distillate is determined by means of a photoelectric cell (recording of liquid level in measuring cylinder) and is recorded concurrently with the temperature.

Card 1/1

CZECHOSLOVAKIA/Laboratory Equipment. Instruments. Their  
Theory, Construction, and Use.

Abs Jour: Ref Zhur-Khim., No 13, 1958, 43155.

Author : Matejicek A

Inst :  
Title : Laboratory Rectification Column.

Orig Pub: Chem. prumysl, 1956, 6, No 8, 343.

Abstract: Brief description of a column with an electro-magnetic device for the collection of samples or fractions.

Card : 1/1

MATEJICEK, A.

A laboratory viscosimeter for measurements in vessels used for chemical reactions.

p. 106 (Chemicky Prumysl. Vol. 7, no. 2, Feb. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (MIEA) I.C. Vol. 7, no. 2,  
February 1958

SIVOKOVA, Marta; MATEJICEK, Alois

The ternary system methanol-water-1,2-dichloroethane.  
Chem prum 12 no.10:544-546 0 '62.

1. Vyzkumny ustav syntetickych pryskyric a laku,  
Pardubice.

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032820010-4

MAKA, Jiri; MAKA, Anna

laboratory and equipment for flakies. - not listed in  
600083 Je 1948.

1. Research Institute of Synthetic Resins, part 6, 1.

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032820010-4"

**MATEJČEK**  
EXCERPTA MEDICA Sec 9 Vol. 9/8 Surgery Aug 55  
4368. MATĚJČEK E. Chir. Klin., Košice. \*Thromboza abdominalnej aorty so zreteľom na výskyt u žien. Thrombosis of the abdominal aorta: its incidence in women ROZHL. CHIR. 1954, 33/2-3 (86-92) Illus. 3 A short survey of the cases published in the world literature from the first description of Graham to that of Lerche (1814-1940). Three cases are analysed and the relation to thrombosis of an iliac artery is emphasized. Gangrene of the limb was present in all 3 cases. Bilateral lumbar sympathectomy was followed by marked improvement with a return of the interrupted menstruation. Vlcek - Prague

MATEJICEK, E.

Two unusual cases of six-lobe lungs. Bratisl. lek. listy 34 no.5:  
525-531 May 54.

1. Z Chirurgickej kliniky LFSU v Kosiciach, prednosta prof. dr.  
J.Krasovicky.  
(LUNGS, abnormalities,  
accessory lobes)  
(ABNORMALITIES,  
lungs, accessory lobes)

MATEJICKY, Mil

Phlegmasia caerulea dolens with gangrene of the extremities.  
Roshl.chir. 34 no.5:304-310 May 55.

1. Z chirurgickej kliniky v Kosiciach - prednosta: prof. MUDr  
J.Knezovicky

(TEROMBOPHLEBITIS  
phlegmasia caerulea dolens, with gangrene of  
extremities, pathol.)

(GANGRENE  
extremities in phlegmasia caerulea dolens, pathol.)

MATEJICEK, E.

Surgery of the thoracic aorta. Rozhl.chir. 34 no.9:561-569 Nov 55.

1. Z chirurgickej kliniky v Kosiciach, prednosta prof. J.Knazovicky  
(AORTA, surgery,  
thoracic (Cz))

MATEJICEK, E.

Possibilities of application of Blakemore's synthetic rings in  
vascular surgery. Rozhl.chir. 34 no.10:594-604 Dec 55.

1. Z chirurgickej kliniky LFSU v Kosiciach; prednosta prof. MUDr  
Jan Knazovicky.

(CARDIOVASCULAR SYSTEM, surgery,  
plastic rings in exper. surg. (Gz))

MATEJÍČEK MEDICA Sec.9 Vol.11/6 Surgery June 57

3281. MATEJÍČEK E. and FANTIŠ A. Chir. Klin. LFUK, Košiceach; Chir. Klin. VLA, Hradec Králové. "Transplantácia cievnych štiepov. Transplantation of vascular grafts" BRATISLAVSKÉ LEKÁRS. LISTY 1956, 36(II)/1 (24-37) Tables 2 Illus. 5

After a review of the literature on advantages and deficiencies of different conservation methods, the authors present their early results with the transplantation of vascular grafts in 43 dogs. They performed 19 experiments on peripheral arteries with venous grafts, and 24 on the thoracic part of the aorta with aortic grafts. They used as preserving agent a mixture of 10% plasma and physiological saline with the addition of penicillin and formalin which represented in the preserving solution a 0.1-0.2% concentration. Grafts so preserved kept their elasticity and solidity for a relatively long time. Based on the clinical and histologically confirmed findings the authors are of the opinion that, beside the quality of the preserving agents and the method of performing the transplantation, morphological changes in the graft are caused by functional stress and the biological milieu into which they are placed.

MATEJICK, E.

Problems of angiostomy in chronic experiments. Cesk. fysiol. 6 no.1:  
104-105 '57.

1. Chirurgicka klinika v Kosiciach.  
(BLOOD VESSELS, surgery,  
angiostomy (Cz))

MATEJICEK, Emil

Advantages and disadvantages of artificial extracoronary circulation  
in myocardial revascularization. Rozhl. chir. 38 no.4:243-254 Apr 59.

1. Z chirurgickej kliniky LFUK v Kosiciach, prednosta: prof. J. Knazovicky.  
(HEART, surg.  
extracoronary myocardial revascularization (Cz))

EXCERPTA MEDICA Sec 18 Vol 4/1 Cardiovas. Dis. Jan 60

226. Phlegmasia caerulea dolens in infants MATEJICEK E., FISCHLER V. and KOVÁČIK  
M. Surg. and Ped. Depts, Komensky Univ., Košice Ann. paediat. (Praha) 1960  
192/6 (369—377) Illus. 2 (XVIII-7\*)

MATEJICEK, E.

Modern trends in complex therapy of late embolisms. Rozhl. chir.  
39 no.4:237-244 Ap '60

1. Chirurgicka klinika v Kosicach, UK, prednosta prof. J. Knazovicky.  
(THROMBOEMBOLISM, ther.)

MATEJICEK, B.

A case of double rupture of aneurysm of the abdominal aorta.  
Rozhl. chir. 39 no.5:353-359 My '60.

1. Chirurgicka klinika univerzity J.P. Safarika v Kosiciach,  
prednosta prof. J. Knazovicky.  
(AORTIC ANEURYSM compl.)

MATEJICK, E.

Bilateral parasternal congenital diaphragmatic hernia in a 12-year-old girl. Česk. pediat. 16 no.4:349-352 Ap '61.

1. Chirurgickej klinika lek. fak. Univ. P. J. Safarika v Košiciach,  
prednosta prof. J. Knazovicky.

(HERNIA DIAPHRAGMATIC in inf & child)

MATEJICEK, E.; MILICHOWSKY, E.; FAGULA, J.

Elevation of venous pressure in the coronary sinus and its effect  
on coronary circulation and on changes in the myocardium. Rozhl.  
chir. 40 no. 7:444-452 Jl '61.

1. Chirurgicka klinika v Kosiciach, prednosta prof. dr. J. Knazovicky.

(BLOOD PRESSURE physiol) (CORONARY VESSELS physiol)  
(MYOCARDIUM pathol)

- 35 269
- F A E D I F L H W*
- Bratislavské lekárničné listy, Vol. 1, No. 9, 1962  
Copyright by the Publishing House of the Slovak Academy  
of Sciences (Vydavatelstvo Slovenskej akadémie vied) 1962.
1. "Professor Vladimír RAVAT, MD and Doctor of Sciences, is busy," editorial, pp 521-522.
  2. "Postoperative Complications and After-Treatment in Patients Having Undergone an Operation Using Extracorporeal Circulation," by K. ŠUBERTOVÁ, M. SCHROEDER, V. ŠPĚLÁČEK, M. ČERNÝ, J. BUDÍKOVÁ, Z. VÄSTROMOVA, M. ŠTĚPANOVSKÝ and T. OUDROUCHOVÁ of the No. 2 Surgery Clinic at the Medical Faculty of Comenius University (Užitkového Inžinierstva) in Bratislava, headed by (president) V. ŠTĚPAN, corresponding member of the ČAV (Ceskoslovenská Akademie Věd) (Czechoslovak Academy of Sciences); pp 523-535 (English summary).
  3. "Controversial Problems in the Diagnosis of Bone Tumors and Similar Bone Afflictions," by J. ČERNÝ, MD—chief (president) and correspondingly the author of the ČAV (Ceskoslovenská Akademie Věd) (Czechoslovak Academy of Sciences)—and B. ŠČETNÝ, of the Orthopaedic Clinic (Orthopedics Clinic) at the Medical Faculty of Comenius University (see No. 2) in Bratislava; pp 535-545 (English summary).
  4. "Traumatic Craniozous Fistulae and Cerebral Vascular Fistulae—Survey Results in 55 Cases," by docent J. ČERNÝ, MD, head of the Clinic of Pediatric and Brain Surgery (Kinderchirurgie) a member of church at the Medical Faculty of Comenius University (see No. 2) in Bratislava; pp 548-556 (English summary).
  5. "Tissue-Specific Operations of the Small Intestines," by K. ČADÉK, of the No. 1 Surgery Clinic at the Medical Faculty of Comenius University (see No. 2) in Bratislava, headed by professor K. ČADÉK, MD; pp 555-558.
  6. "The Problem of the Extracorporeal Implantation of Articular Grafts," by docent P. J. ŠAFER, MD, chief (president) of the Surgery Clinic at the Medical Faculty of Comenius University (Užitkového Inžinierstva) in Košice; professor J. ŠAFROVSKÝ, MD; pp 559-569 (English summary).
  7. "On the Problem of Resection and the Reconstruction Treatment of Radicular Fibrosarcomas of the Spine," by M. KUDRINA, O. ŠALAK, B. CHALUPČÍK, I. MORTÁČEK and M. ČELÍKOVÁ, from the Institute of Pathological Anatomy (Patologická anatomický ústav) of MU (Masaryk University) Faculty of Medicine in Olomouc headed by docent V. VALACH, MD; the Surgery Clinic (Chirurgická klinika) of docent V. VALACH, MD; the Surgery Clinic (Chirurgická klinika) of MU in Olomouc, headed by professor V. RAJČEK, MD and Doctor of NV in Olomouc, headed by professor V. RAJČEK, MD.

— 1/2 —

MATEJICEK, E.

On the problem of the intramyocardial implantation of homologous arteries to increase myocardial blood flow. Bratisl. lek. listy 42 no.9:559-569 '62.

1. Z Chirurgickej kliniky Lek. fak. Univ. P. J. Safarika v Kosiciach,  
prednosta prof. MUDr. J. Knazovicky.

(CORONARY VESSELS surg) (HEART SURGERY exper)

MATEJICEK, E.

Possibilities of revascularization with intramyocardial implantation  
of arterial grafts. Rozhl. chir. 42 no.10:685-692 O '63.

1. Chirurgicka klinika Lekarskej fakulty UPJS v Košiciach, prednosta  
prof. dr. J. Knazovicky.

MATEJICEK, E.

Intramyocardial tissue implantation in the prevention of  
experimental infarct. Bratisl. lek. listy 43 Pt. 2 no.8:  
444-452 '63.

1. Chirurgicka klinika Lek. fak. Univerzity P.J. Safarika v  
Kosiciach, veduci prof. MUDr. J. Knazovicky.  
(MYOCARDIAL INFARCT) (OMENTUM)  
(MUSCLE TRANSPLANTATION)  
(ELECTROCARDIOGRAPHY)  
(HEART ENLARGEMENT)  
(TRANSPLANTATION)

MATEJICEK, FRANTISEK

Czechoslovakia CA: 47:12105

"Determination of metals and boron in metal borides."

Chemie (Prague) 8, 87-9 (1952).

MATEJICEK, FRANTISEK

Czech

CA: 47:11075

"Determination of oxygen and moisture in electrolytically produced hydrogen."

Chemie (Prague) 8, 137-9 (1952)

MATEJICEK, F., inz.

Ceramic coatings applied under heat. Podn org 18 no. 7:328  
Jl '64.

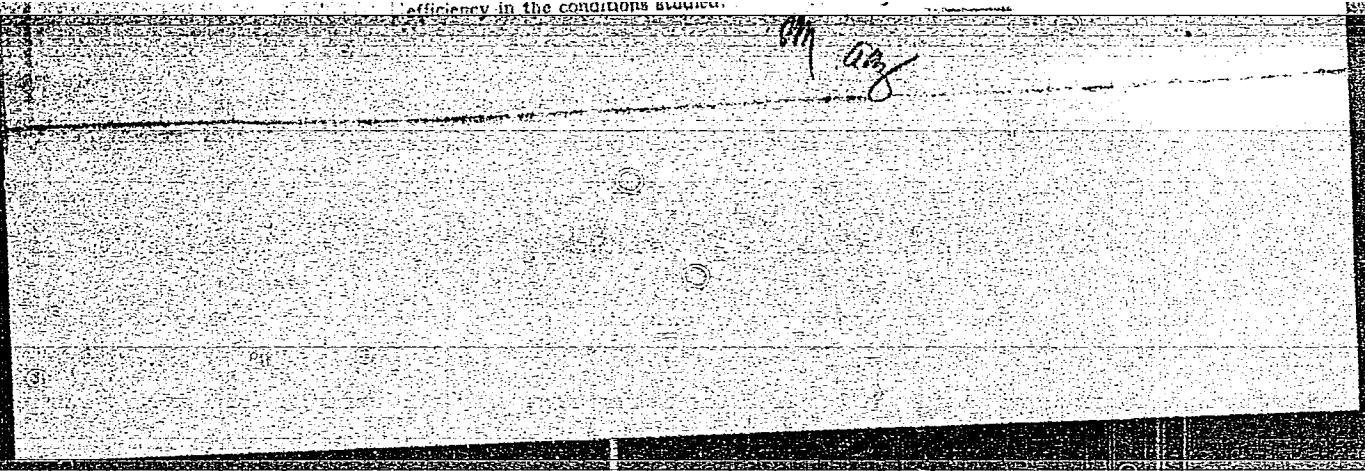
1. State Research Institute of Material Protection.

MATEJICEK, J.

~~H<sub>2</sub>SO<sub>4</sub>~~ were investigated at atm-pressure in a packed column and under pressure in a stirred reactor. Increase of ethylene partial pressure from 10 to 23 atm lowered consumption of H<sub>2</sub>SO<sub>4</sub> by 7—17% and cut the loss of acid by 4—8%. Reaction time was lowered the speed of the stirrer to

"APPROVED FOR RELEASE: 06/14/2000

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MATEJICEK, Jan; MINAR, Jiri; FESSL, Vaclav

Hazards related to Trendelenburg's position. Cesk. gyn. 26 [40]  
no.7:511-51; Ag '61.

1. MUNZ Plzen, gyn. por. odd., reditel MUDr. Milan Sedlak Anestezio-  
logicke oddeleni SFN Pizen, prim. MUDr. Jiri Minar I chir. klin. KU  
v Pizni, prednosta doc. MUDr. Karel Domansky.  
(GYNECOLOGY)

VOJTISEK, Oldrich, MUDr.; MATEJICEK, Vladimir

Manifestations of reduced bone marrow activity in gold treatment  
of progressive chronic polyarthritis. Cas. lek. cesk. 95 no.32:  
884-888 17 August 56.

1. Z Vyzkumneho ustavu chorob reumaticy v Praze. Red. prof.  
MUDr. Frantisek Lenoch.

(ARTHRITIS, RHEUMATOID, ther.

gold, eff. on hemopoietic system (Cz))

(HEMOPOIETIC SYSTEM, physiol.

eff. of gold ther. in rheum. arthritis (Cz))

(GOLD, ther. use,

rheum. arthritis, eff. on hemopoietic system (Cz))

MATEJICEK, VLADIMÍR

VOJTEŠEK, Oldřich; MATEJICEK, Vladimír

Experimental studies on daytime variations of eosinophil count.  
Cas. lek. česk. 96 no.18:559-564 3 May 57.

1. Vyzkumný ustav chorob reumatických v Praze. Ředitel prof.

MUDr. František Lenoch.

(EOSINOPHIL COUNT, determ.  
changes during daytime (Cz))

(PERIODICITY,  
daily eosinophil count changes (Cz))

KOUTSKY, Jaroslav; VONDRAK, Zdenek; CHLOUPKOVA, Karla; MATEJICEK, Valdimir

Autonomic profile of schizophrenia. Cas. lek. cesk. 97 no.30:  
938-943 18 July 58.

1. Stani lecebna psychiatricka. Jihlava, red. prim. Dr. Vilem Kotina.  
J. K., Jinlava, Dlouha stezka I.  
(SCHIZOPHRENIA, physiol.  
autonomic NS (Cz))  
(AUTONOMIC NERVOUS SYSTEM, in var. dis.  
schizophrenia (Cz))

MALEC, R.; ROZSIVAL, Vl.; MATEJICEK, V.; SCHINDLERY, C.

Our experience with surgical therapy of severe closed brain injuries.  
Rozhl. chir. 41 no.4:284-288 Ap '62.

1. Neurochirurgicka klinika KU v Hradci Kralove, prednosta prof.  
MUDr. R. Petr.

(BRAIN wds & inj)

KROO, M.; MATEJICEK, V.; MALEC, R.

Comparison of the clinical picture of subdural hematomas in various age groups. Rozhl. chir. 41 no.9:609-613 S '62.

1. Neurochirurgicka klinika lekarske fakulty KU v Hradci Kralove, predn. prof. dr. R. Petr.

(HEMATOMA SUBDURAL)

NEMECEK, Stanislav; MATEJICEK, Vaclav.

On the technic of histological neuronography. Sborn.ved. prac.  
lek.fak.Karlov.Univ.(Hrad.Kral.) 6 no.5:563-568 '63

1. Neurologicka klinika; prednosta: prof. MUDr. R.Petr., LFUK  
v Hradci Kralove.

\*

NADVORNÍK, P.; MATEJICEK, V.; DROZEN, V.; LELEK, J.; SPACEK, C.; SKOCDOPOLE, B.

Experiences with the use of cybernetic diagnosis in neuro-surgery. Cesk. neurol. 26 no. 6:413-416 N°63.

1. Neurochirurgicka klinika, kyberneticky kabinet a strojni pocetni stanice ZVU v Hradci Kralove UME, utvar automatizace, Praha.

\*

MATEJICEK, V.; NADVORNIK, P.; DROZEN, V.

Further progress and perspectives in machine diagnosis in  
neurosurgery. Cesk. neurol. 27 no.6:389-393 N '64.

1. Neurochirurgicka klinika (prednosta prof. Dr. R. Petr)  
a kyberneticky kabinet lekarske fakulty Karlovy University  
v Hradci Kralove.

L 07913-67

ACC NR AP6031226

SOURCE CODE: CZ/0088/66/000/005/0435/0439

16

AUTHOR: Nadvornik, Pavel (Docent; Doctor of medicine; Candidate of sciences);  
Matejicek, Vaclav (Doctor of medicine; Hradec Kralove); Votruba, Antonin  
(Engineer); Houda, Vaclav (Graduate mathematician; Prague); Drozen, Vladimir  
(Doctor; Hradec Kralove)

ORG: [Nadvornik; Matejicek] Neurosurgical Department, Faculty of Medicine,  
Hradec Kralove (Neurochirurgicka klinika lekarske fakulty); [Votruba; Houda]  
Division of Automation, UME, Prague (Utvar automatizace, UME); [Drozen]  
Pedagogical Faculty, Hradec Kralove (Pedagogicka fakulta)

TITLE: Diagnostic work by an LGP 30 computer

SOURCE: Kybernetika, no. 5, 1966, 435-439

TOPIC TAGS: computer application, nervous system disease, medical science

ABSTRACT: Diagnosis of neurosurgical diseases by an LGP 30 computer has been  
experimentally tested at the Neurosurgical Department of the Faculty of Medicine  
in Hradec Kralove. The probability matrix for the computer work was designed and  
based on a statistical evaluation of 150 case histories of the department in which

Card 1/2

L 07913-67

ACC NR AP6031226

56 different diseases have been established from 60 clinical findings (symptoms). Bayes equations were utilized in the program. For satisfactory results the computer had to name the correct diagnosis as first or second item among five possibilities. The machine succeeded in 108 cases, i. e., in 72. 6% of patients. This result equals the diagnostic work of medical specialists in outpatient departments, and proves better than that of emergency and district medical practitioners. Orig. art. has: 3 tables and 1 formula.

SUB CODE: 06, 09/ SUBM DATE: 11Dec65/ ORIG REF: 003/

Cord 2/2

vmb

Neurology

CZ/0088/66/000/005/0435/0439

## CZECHOSLOVAKIA

AUTHOR: Nadvornik, Pavel (Docent; Doctor of medicine; Candidate of sciences);  
Matejicek, Vaclav (Doctor of medicine; Hradec Kralove); Votruba, Antonin  
(Engineer); Houda, Vaclav (Graduate mathematician; Prague); Drozen, Vladimir  
(Doctor; Hradec Kralove)

ORG: [Nadvornik; Matejicek] Neurosurgical Department, Faculty of Medicine,  
Hradec Kralove (Neurochirurgicka klinika lekarske fakulty); [Votruba; Houda]  
Division of Automation, UME, Prague (Utvar automatizace, UME); [Drozen]  
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based on a statistical evaluation of 150 case histories of the department in which

1/2

LENKOCH, F.; KADIKOVA, L.; KALINA, M.; V.

Rehabilitation therapy in progressive polyarthritis. Fyzik.  
vestn. 43 no. 12 (1971), No. 15

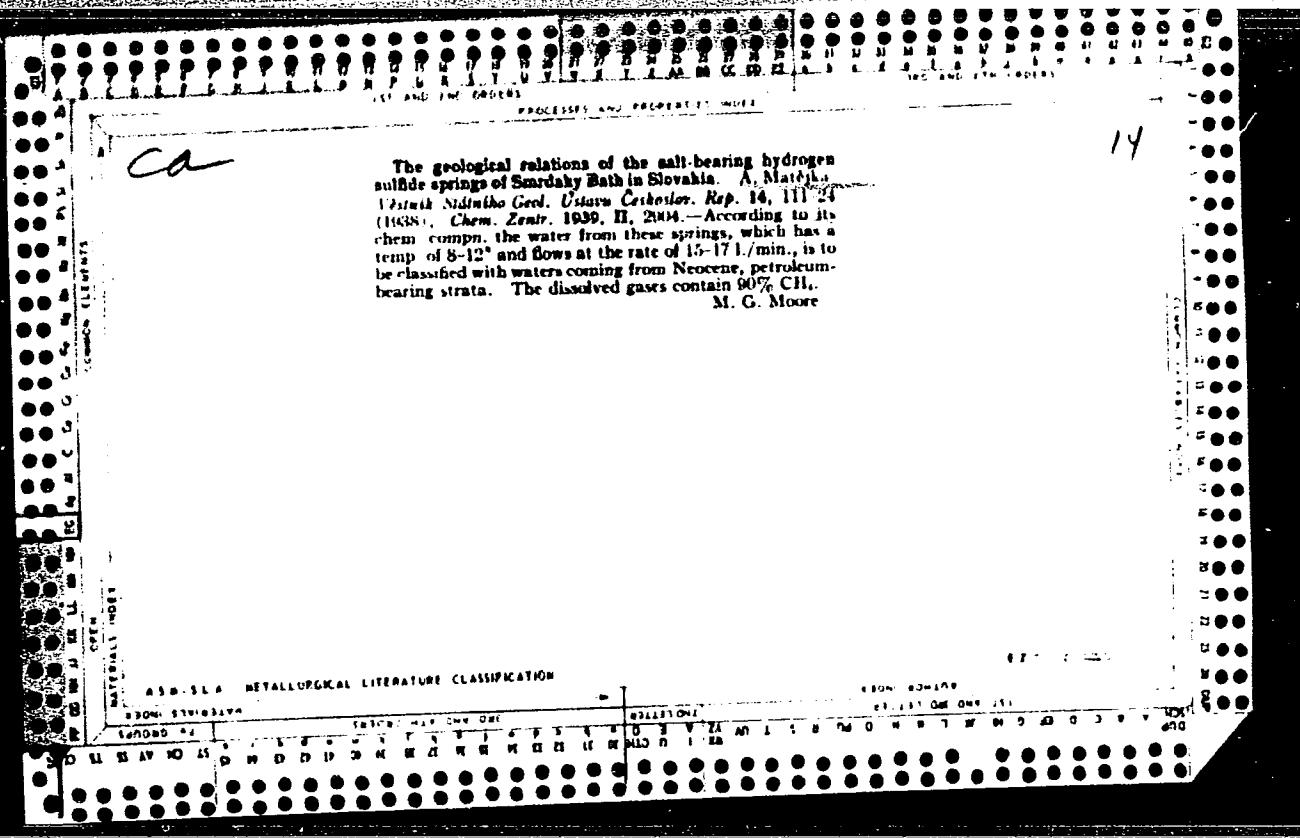
i. Vyzkumnyj institut legevanijskoj v praze (Institut de recherche  
F. Lenoch, Dr.).

MATEJKA, A.

"Do not be afraid of breakdowns in electric equipment. p. 246."

SVET MOTORU. Praha, Czechoslovakia, Vol. 13, No. 8, April 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 6, June 1959  
Unclassified.



CA  
1957

*2*  
Fuels and Combustion  
Products

Geological occurrence of free nitrogen in Jirny near Prague. Albin Matfka and Zdenek Roth (State Geol. Inst., Prague). *Věstn. Stř. Geol. Ústavu Českého Rep.* 25, 283-5, in French, 289(1950).—In a drilling in Jirny park, gas under excess pressure of about 1 atm. was found at a depth 16.6 m. The gas contained N 95.0, CO<sub>2</sub> 3.2, O 0.8, CO 0.8, unknd. hydrocarbons 0.2%, and no rare gases. It probably originated from air trapped by infiltrating water, the O being removed by the oxidation of pyrite or org. matter.  
H. Newcombe

C. A.  
1951

*Mineralogical and Geological  
Survey*  
8

Occurrence of copper ore at Ladamovce in the carbonaceous of the "Zemplin Island" in eastern Slovakia. Alfonz Matéjka and Zdenek Roth (State Geol. Inst., Praha) *Práce Státn. geol. Ústavu Českoslov. Rep.* 25, 267-9, in English, 291 (1950). Pyrite, chalcopyrite, malachite, and more rarely azurite were found along with barite. Their geological origin is considered. H. Newcombe

MATEJKA, A.; LESKO, B.

"Flysch and the Inner Klippe Zone in Eastern Slovakia Between Hanušovce  
and Humenne." p. 13. (GEOLOGICKY SBORNÍK. Vol. I., No. 1/1, 1955;  
Bratislava, Czech.)

So: Monthly List of East European Accessions, (EAL), LC, Vol. I., No. ,  
April 1955, Uncl..

MATĚJKĀ, Alois

The pelosiderite of the Moravosilesian Beskydy, their historical importance, geological occurrence, petrographical and chemical nature, and their origin. Zdeněk Roth and Alois Matějka (Czech. Geol. Survey, Prague). *Cenotechnica* No. 15, 1-111 (in English, 91-111) (1953).—Clay ironstones of high siderite content were mined from about 1770 to 1905. Chem. analyses of 34 samples show Fe 10.4-32.75, Mn 0.34-2.04, P 0.03-1.21, S 0.23-2.42%. Petrographic descriptions are given.

(3)

MATEJKA, ALOIS.

Geologie Magurskeho Flyse v severnim povodi Vahu mezi Bytcou a Trencinem; s mikrobiostatigrafickou stati Evy Hanzlikove. (1. vyd.) V Praze, Nakl. Ceskoslovenske akademie ved, 1956. 332 p. (Rozpravy Ustredniho ustavu geologickeho, sv. 22) (Geology of the Magura Flysch in the northern basin of the Vah River between Bytca and Trencin. 1st ed. English and Russian summaries. illus., map (fold.col.in pocket), bibl., footnotes, tables)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 6, June 1957, Uncl.

MATEJKA, A.

"The working conference on micropaleontology, paleontology, and geology of the later Carpathian Tertiary at Smolenice, in February 1957."

p.378 (Vestnik, Vol. 32, no. 6, 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 6, August 1958

MATEJKA, A.

GEOGRAPHY & GEOLOGY

Periodical: VESTNIK, Vol. 33, no. 3, 1958.

MATEJKA, A. The Cenomanian from Dub in the foothills of the Moravian-Silesian Beskids. p. 170.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 2,  
February 1959, Unclass.

MATEJKA, A.

4

15.12  
✓ Occurrence of a bauxitic rock at Drienovce, southern  
Slovakia. Alois Matejka (Univerzitnímústav geol., Prague).  
Věstn. dřevěn. záv. geol. 33, 270-81 (1958) (German  
summary).—Two chem. analyses are given. Differential  
thermal analysis study showed the presence of gibbsite,  
boehmite, and hematite. Michael Fischer — *[Signature]*

CC

11

MATEJKA, A.

(S)	Rabinets, A. Ye., Candidate of Geological-Historical Sciences	507/30-292-1-16/57
AUTHOR:		
PERIODICAL:	Vestnik Akademii nauk SSSR. 1959, № 1, pp 65 - 69 (USSR)	
ABSTRACT:	The 4th Congress of Geologists of the Carpathians and Balkans (3rd year geological Congress) took place in Kiev and Lvov on September 16-29, 1958, 250 delegates taking part. Members of the Association are Bulgaria, Hungary, Poland, Romania, the USSR, Czechoslovakia and Yugoslavia. The reports discussed tectonics of the Carpathians and their mutual relationship with the Balkanides, the stratigraphy and paleogeography of the Carpathians, vulcanicity in the Carpathians, the formation of different mineral resources in them. O. Vyslov, on behalf of the organizing committee of the Congress, reported on questions of tectonics of the Soviet West Carpathians. M. Marci reported on tectonic investigations in the Central West Carpathians by Czechoslovak geologists. The Bulgarian and Romanian scientists T. Santeah, M. Bliznak, I. Drailovitch, A. Ropchuk, D. Petruile reported on the structure of the South Carpathians. The Bulgarian scientist Ye. Bonchev outlined the mutual relationships between Carpathians and Balkanides. The Polish researchers G. Grzibowski supported the hypothesis on the deposit structure of the West Carpathians. K. J. Skarlicki, M. Pallinger (Romania), M. Katalinicz (Poland) and the Czechoslovak researcher A. Pecka, J. Ullas reported on questions of stratigraphy and paleogeography. The Soviet scientist - (M. N. Vassilovich, O. S. Yerushalimsky) assumes that the formation of flysch deposits in the Carpathians is associated with the most mobile zones of the earth's crust. J. J. Januszewich arrived in the district of Starry Harbor in the possibility of a formation of flysch layers in the Soviet East Carpathians. Report by E. Karolob-Sadecky (Hungary). D. Petruile (Romania) and the Soviet investigators Yu. E. Lasa, P. Petruilev (former) gave questions of vulcanicity and conditions of further development of deposits. The Congress emphasized the necessity of carrying on common investigations in different branches of geology. For a coordination of the investigations permanent commissions were constituted: for tectonics, stratigraphy, paleogeography and paleontology; magnetism and petrology, geochemistry and mineralogy. Hydrogeology and for seismic maps. The 5th Congress of the Association is anticipated for 1961 in Romania.	Card 1/3
TITLE:	Congress of Geologists of the Carpathians and Balkans (3rd year geological Congress) 1959, № 1, pp 65 - 69 (USSR)	Card 2/3

MATEJKA, A.

"Tectonic map of Europe"

Vestnik. Praha, Czechoslovakia. Vol. 34, no. 2, 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Uncles

MATEJKA, A

MATEJKA, A. (Chekhoslovakia)

Basic characteristics of the geology of the flysh zone in the  
Western Carpathians. Mat.Karp.-Balk.assots. no.1:55-62 '60.  
(MIRA 14:12)  
(Carpathian Mountains--Flysh)

~~NAME AND ADDRESS~~

SURNAME, Given Names

Country: U.S.A.

Academic Degrees: /

Affiliation: Political Teacher, U.S.A.

Source: U.S.A.

Data:

*MATEJK A, A.*

CZECHOSLOVAKIA

MATEJK A.

Prague, Vestnik Ustredniho Ustavu Geologickeho,  
No 1, 1963, pp 67-70

"International Symposium on the Present Movements  
of the Earth's Crust."

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032820010-4

MATEJKA, Alois

Professor Odolen Kodym; obituary. Cas min geol 8 no.4:414-415 C '63.

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R001032820010-4"

MATEJKA, B.

Moravus, J.; Vetiska, A. Effect of rolling on the fatigue limit in  
alternating tension. p. 752.  
STROJIRENSTVI, Prague, Vol. 4, no. 10, Oct. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6,  
June 1956, Uncl.

MATEJKA, Dusan, inz.

~~Experience with continuous measurement of water turbine flow.~~  
Energetika Cz ll no.l:40-43 Ja '61.

MATEJKA, Dusan, inz.

Flow meters of water-power plants. Energetika Cz 11 no.5:238-240 My  
'61.

TEKEL, L., inz.; MATEJKA, D., inz. CSc.

Problem of optimum control of the Vah River Cascade. Bul  
EGU no. 6:1-5 '63.

TEKEI, L.; MATEJKA, D.

Research on the control of a channel group of hydraulic power stations. Bul EGU no.1:16-21 '64.

MATEJKA, Dusan, inz. CSc; SZUCS, Juraj, inz.

Operational experiences in measuring the efficiency of hydro-electric sets. Energetika Cz 14 no.2:79-82 F'64

l. Power Research Institute, Bratislava.

MATEJKA, Dusan, inz. CSc.; TWK L. Ladislav, inz.

Covering outage losses by channel hydroelectric plants. Energetika  
Cz 14 no.5; 209-213 My '64.

1. Research Institute of Power Engineering, Bratislava.

KRAUS, Z.; MATEJKA, F.; MAZAK, J.

Myelogram and cryoglobulins in chronic atrophic acrodermatitis.  
Cesk. derm. 39 no.1:11-17 F'64.

I. Dermato-venerologicka klinika (prednosta: prof.dr.B.Janousek)  
a II. interni klinika (prednosta: prof.dr. V.Jurkovic), lekarske  
fakulty KU v Hradci Kralove.

\*

Country : CZECHOSLOVAKIA  
Category: RZhDiss., N 19, 1958, 38984

Author : Matejka, J.  
Inst : -  
Title : Trial of therapy of Basedow's Exophthalmos with  
Serpasil.

Orig Pub: Lekar. Obzr., 1957, 6, N 12, 737-741

Abstract: No abstract.

Card : 1/1

MATEJKA, J., inz.; STOJDL, J.

Experiences in crushing the intergrown clay coal in the  
Sokolov District. Uhli 6 no.6:211-212 Je '64.

1. Sdruzeni hnedouhelnych dolu a briketaren, Skolov.

MATEJKA, J.

Electric coal-mining machinery from the point of view of electric-power supply.

P. 427. ( ENERGETIKA.) (Praha, Czechoslovakia) Vol. 7, No. 8, Aug. 1957

SO: Monthly Index of East European Accession (EIAI) I.C. Vol. 7, No. 5, May 1958

HAT DIK, J.

"Safety first in mines."

p. 145 (BIRTEK, Vol. 3, No. 4, May 1961, P. 145, cited above).

Monthly Index of Best Current References (MIB), Vol. 1, No. 1, April 1961.

AHLERS, I.; KORTVELYESY, S.; MATEJKA, T.; SCHIFFOVÁ, I.; SZABO, P.  
SZABO, T.

Diagnostic importance of the intravenous angiography  
Cas. lek. cesk. 103 (1964), 25-26, 21-2164.

I. Interní oddělení v Ústřední nemocnici v Brně, prof.  
MUDr. I. Matejka; Chirurgické oddělení v Brně, prof.  
v. k. o. MUDr. S. Kortvelyesy; Radiologické oddělení  
fakultní nemocnice v Brně, prof. docent MUDr. I. Schiffová.

MATEJKO, Jaroslav, Inv.

The IFT10 ferritintransistor element in logic circuits.  
Slaboprovody časopis 25 no.11:658-660 N 164.

In: Proceedings of the Conference Mathematical Methods in Physics  
in Prague, 1964, p. 658-660.

1ST AND 2ND LETTER		3RD LETTER	2ND AND 4TH LETTERS		5TH GROUP		MATERIALS INDEX																															
• A	• B	• C	• D	• E	• F	• G	• H	• I																														
• J	• K	• L	• M	• N	• O	• P	• Q	• R																														
• S	• T	• U	• V	• W	• X	• Y	• Z																															
AUTHOR INDEX																																						
45-11-4 METALLURGICAL LIBRARY CLASSIFICATION																																						
<p><b>Metška, J., MAGNESITE INDUSTRY IN CZECHOSLOVAKIA.</b> Narin, 1926, 81.—Czechoslovakian magnesite occurs in the districts Novobrad, Gemer, Abauj, near Ruzinká, Hnáti, Jelava, Oehrina, and Kodax. It is crystalline and similar to the Austrian magnesite of Styria. Its composition is the following</p> <table border="1"> <thead> <tr> <th></th> <th>Sample I</th> <th>Sample II</th> </tr> </thead> <tbody> <tr> <td>SiO<sub>2</sub></td> <td>2.32</td> <td>1.31</td> </tr> <tr> <td>TiO<sub>2</sub></td> <td>0.07</td> <td>0.08</td> </tr> <tr> <td>Al<sub>2</sub>O<sub>3</sub></td> <td>0.40</td> <td>0.51</td> </tr> <tr> <td>Fe<sub>2</sub>O<sub>3</sub></td> <td>3.77</td> <td>4.02</td> </tr> <tr> <td>CaO</td> <td>0.44</td> <td>0.50</td> </tr> <tr> <td>MgO</td> <td>44.42</td> <td>44.50</td> </tr> <tr> <td>SO<sub>3</sub></td> <td>0.27</td> <td>0.14</td> </tr> <tr> <td>CO<sub>2</sub></td> <td>48.51</td> <td>48.56</td> </tr> <tr> <td>Total</td> <td>100.26</td> <td>100.22</td> </tr> </tbody> </table> <p>The largest quarries are in Ruzinká where magnesite arose by change of limestone through thermal solutions and where it is deposited in carbonate, graphitic, and clayish</p> <p>states. These quarries belong to the West Bohemia Chamotte and Kaolin Works, which possesses also kilns for burning of burned magnesite at Lovinobanja and Hnáti and a factory of magnesite brick at Hnáti. Magnesite is burned eccentrically at 800°C in shaft-kilns; then it is dead-burned in other shaft-kilns at about 1500°C. Then follows crushing and cleaning by a magnetic separator. The daily output of the Czechoslovakian magnesite factories amounts to 410 tons of clinkered magnesite and 12 tons of magnesite brick.</p>										Sample I	Sample II	SiO <sub>2</sub>	2.32	1.31	TiO <sub>2</sub>	0.07	0.08	Al <sub>2</sub> O <sub>3</sub>	0.40	0.51	Fe <sub>2</sub> O <sub>3</sub>	3.77	4.02	CaO	0.44	0.50	MgO	44.42	44.50	SO <sub>3</sub>	0.27	0.14	CO <sub>2</sub>	48.51	48.56	Total	100.26	100.22
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## EXCERPTS AND PROPERTIES INDEX

Rational analysis of kaolinite clays. O. KALLAUNEN AND J. MATAIRA. *Czechoslovak. Ceram. Spisovnosti* 1922, 69; *Ceram. Abstracts* 10, 14670. The Czechoslovak Ceramic Society has adopted as official the following method of standard analysis of ceramic earths. This method is to be used exclusively in respect to clays with a substantial content of kaolinite, e. g., kaolins, high-class humus or ceramic masses not contg. any matter that might interfere with the carrying-out of the rational analysis. Whether the rational method of analysis is suitable for any clay, i. e., whether the clay is kaolinitic clay, is best tested by means of the thermal analysis, i.e., by comparing the kaolinite curve with the curve obtained by the test of the submitted sample. To carry out the rational analysis proceed as follows: Dry a sample weighing about 20 g. at a temp. of 110-120° to const. wt. Weigh about 6 g. of the sample ( $\frac{1}{3}$ ), transfer it to a dish, add 50 cc. of water, mix well until a uniform mist is obtained and while stirring add 50 cc. of HCl (d = 1.1). Allow the acid to remain in contact with the sample for a quarter of an hr., stirring the mist every 5 min. with a glass rod. Then filter the acid, wash the residue with water and dry it again to const. wt at 110-120°. From the loss in wt. the quantity of constituents (1%) that can easily be dissolved in HCl can be calculated. From the portion dried last, transfer 1 g. to a Pt crucible and heat over a Meker burner or in an elec. furnace (at 850-1000°) for 30 min. By again weighing the crucible, cooled in the desiccator, and by calcg., the loss in wt. (2%) in this portion of the sample is ded. From the same dried sample weigh about 2 g. into a flat porcelain dish (1 cm high, 4 cm in diam.), spread the matter over the bottom of the dish in a uniformly

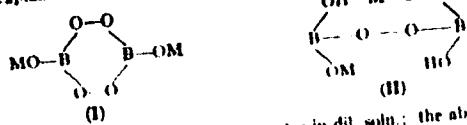
thin layer, introduce the dish into an elec. furnace on a porcelain tripod so that it does not touch the bottom and the walls of the furnace. Over the layer of the substance, at a distance of about 2 mm., place the soldering of a Le Chatelier elec. heat controller switch and control the rise in temp., allowing it to reach 800-700° within an hr. At this temp. let the dish remain in the furnace for another hr. Remove from the furnace and cool in a desiccator. Det. the wt. loss (a%). Transfer the contents of the dish to a glass bottle, add 150 cc. of HCl (d = 1.1) and place the bottle, after introducing a funnel into its neck, into a boiling water bath, taking care that the acid level in the bottle remains under the water level of the hot-water bath. Allow the bottle to remain in this condition for 3 hrs., stirring the contents carefully every quarter of an hr. so that no solid particles adhere to the sides of the bottle over the liquid. After digestion has taken place, filter the usual manner and wash with hot water. Collect the filtrate

X

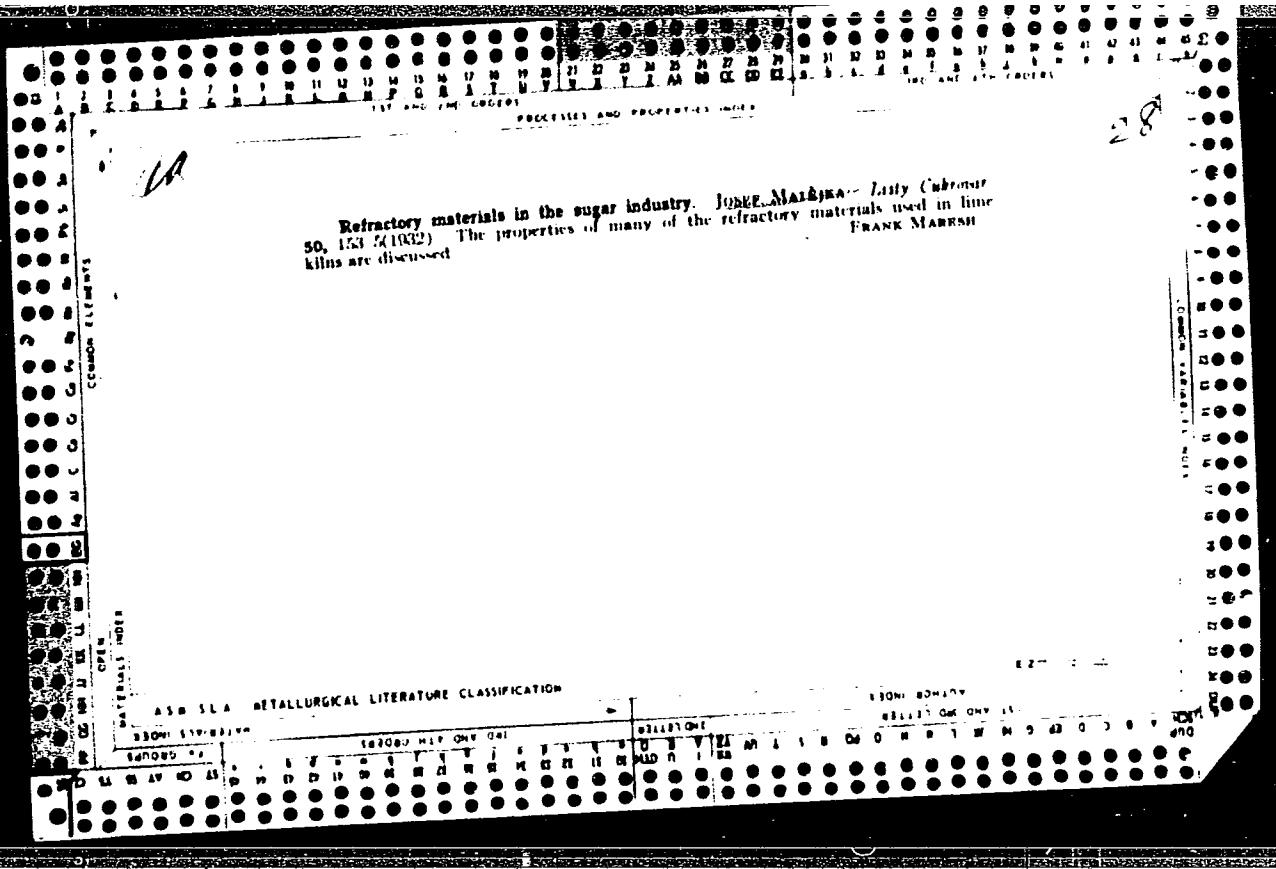
in a 250-cc. measuring jar, allow it to cool down, and add water to bring the vol up to the mark. Temper and mix thoroughly and remove by means of a pipet 100 cc. of the liquid to a porcelain dish. Dry ap. to dryness on a water bath. Moisten the residue with 2 cc. of concentrated HCl, after 10 min. dil with hot distilled water, heat 5 min. on a water bath, and filter off the salts. In this filtrate det. the Al(OH)<sub>3</sub> and Fe(OH)<sub>3</sub> by pptg them with NH<sub>4</sub> as hydroxides; these are filtered, washed and, by blasting in the coke furnace converted into oxides which are weighed ( $\frac{V_1}{V_2} \%$ ). After drying, remove the portion which remained undissolved in HCl from the filter to a black, glossy paper, reduce the filter to ashes, blast the ashes for a short time in a Pt crucible, to which also is added the matter from the black paper. Add to the crucible 1 ml about 1 cc. of water, after 10 min. add 2 cc. of concentrated HF and after a quarter of an hour, 1 cc. of H<sub>2</sub>SO<sub>4</sub> (d = 1.4). Allow contents to remain in this condition for about 2 hrs. at an ordinary temp., and then place on the water bath to drive out HF. If some portion of the mass remains undisturbed, add more HF and repeat the procedure. Place the crucible on a sand bath and warm until dense vapors appear. After the crucible has cooled down, remove the contents carefully by means of 5% H<sub>2</sub>SO<sub>4</sub> and ppt. the soln. with NH<sub>4</sub> in the ordinary way to obtain sesquioxides. These are filtered, washed, heated and weighed ( $\frac{V_3}{V_2} \%$ ). From the results obtained, the percentages of the various constituents of the sample may be calculated as follows: kaolinite =  $2.633 (\frac{V_1}{V_2} - \frac{V_3}{V_2})$ . Quartz = the difference to 100. It is, however, necessary to take into account, besides the mentioned chief constituents, the portion which can easily be dissolved in HCl, Fe<sub>2</sub>O<sub>3</sub>, etc. The kaolinite content is 7.108 %. The carbonates present in some ceramic masses, rarely in pure kaolinite clays, such as CaCO<sub>3</sub>, etc., are contd. in that portion of constituents which can easily be dissolved in HCl. The most suitable furnace for carrying out this rational analysis is the one described in the Bulletin of the Czechoslovakian Assoc. for Research and Testing of Technically Important Materials and Construction of 1919, No. 2. If the sample contains a marked quantity of mica which can be recognized informatively by washing through fine sieves and by means of a microscope, it will be necessary to det. the alkalies as usual, not only in the filtrate after the sesquioxides have been eliminated but also in the original dried sample.

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 The structure of perborates. JAROMÍR MATŘÍKA. Chem. Listy 23, 347 R (1929). The pseudoborates are represented by formula I. This places the pseudoborates in a class with the persulfates. In an iodide soln. they do not release I<sup>-</sup>, for the OH<sup>-</sup> ions formed upon hydrolysis convert the liberated I<sup>-</sup> into iodates, which in the presence of H<sub>2</sub>O<sub>2</sub> form iodides and evolve O<sub>2</sub>. The true perborates may be represented by II. This explains the origin of true perborates, their stability in a dry state and



in concd. soln.; their conversion to the pseudoborates in dil. soln.; the absence of quant results in the Reichenfeld-Rheinhold reaction; the great specificity of the OH<sup>-</sup> ion; why true perborates cannot be dehydrated further than MBO<sub>3</sub>·0.5H<sub>2</sub>O (the H and OH are constitutional elements). FRANK MARSHALL



Infuse sugar solutions on the properties of calcium mortars and bricks. Jozef Matlicka, Storico 1994, 119; Chem. Abstr. 10, Abstract REG 3. The strength of mortars is increased 2 times and the permeability 6 times by 1% sugar soln.

